

Amendments to the Claims:

The listing of the claims will replace all prior versions, and listing, of the claims in the application:

Listing of Claims:

1. (Original) An electronic circuit chip comprising:

a memory for storing information defining an encryption procedure assigned to the electronic circuit chip;

at least one input to the electronic circuit chip for writing, to the memory, the information defining the encryption procedure assigned to the electronic circuit chip, and for receiving data to be encrypted by the encryption procedure assigned to the electronic circuit chip;

encryption circuitry for reading from the memory the information defining the encryption procedure assigned to the electronic circuit chip, and for encrypting the data from said at least one input to the electronic circuit chip according to the encryption procedure assigned to the electronic circuit chip, to produce encrypted data; and

at least one output from the electronic circuit chip for transmitting the encrypted data produced by the encryption circuitry;

wherein the electronic circuit chip is constructed so that the information defining the encryption procedure assigned to the electronic circuit chip cannot be read from the memory from any output of the electronic circuit chip; and

wherein the electronic circuit chip is constructed so that it is virtually impossible

to recover the information in the memory by probing, inspection, or disassembly; and
which includes a metal shielding layer over the memory so that the information
stored in the memory cannot be read by visual inspection or probing.

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2. (Original) The electronic circuit chip as claimed in claim 1, wherein the
electronic circuit chip is a monolithic semiconductor integrated circuit chip.

3. (Original) The electronic circuit chip as claimed in claim 1, wherein the
memory is an electrically erasable and programmable read-only memory.

4. (Original) The electronic circuit chip as claimed in claim 1, wherein said
encryption circuitry includes a microprocessor for computing the encrypted data.

5. (Original) The electronic circuit chip as claimed in claim 4, wherein the
microprocessor is constructed to execute an encryption program stored in the memory,
and the encryption program defines the encryption procedure assigned to the electronic
circuit chip.

6. (Original) The electronic circuit chip as claimed in claim 4, wherein said
microprocessor is programmed to read an encryption key from the memory, and to
compute the encrypted data using the encryption key, and the encryption key defines the
encryption procedure assigned to the electronic circuit chip.

7. (Currently amended) An electronic circuit chip comprising:

a memory for storing information;

a microprocessor coupled to the memory for reading information from the memory;

at least one input to the electronic circuit chip for receiving information to be written to the memory, and for receiving data to be processed by the microprocessor; and

at least one output from the electronic circuit chip for transmitting data processed by the microprocessor;

wherein the electronic circuit chip is constructed so that information can be stored in the memory but not read from any output of the electronic circuit chip, and the microprocessor is programmable for encrypting data in accordance with an encryption procedure defined by information that can be stored in the memory but not read from any output of the electronic circuit chip[[:]]; .

wherein the electronic circuit chip is constructed so that it is virtually impossible to recover the information in the memory by probing, inspection, or disassembly; and

which includes a metal shielding layer over the memory so that the information stored in the memory cannot be read by visual inspection or probing.

8. (Original) The electronic circuit chip as claimed in claim 7, wherein the electronic circuit chip is a monolithic semiconductor integrated circuit chip.

9. (Original) The electronic circuit chip as claimed in claim 7, wherein the memory is an electrically erasable and programmable read-only memory.

10. (New) The electronic circuit chip as claimed in claim 1, wherein the electronic circuit chip is a monolithic semiconductor integrated circuit chip, the memory is an electrically erasable and programmable read-only memory, and the metal shielding layer over the memory is an upper layer of metal on the electronic circuit chip.

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11. (New) The electronic circuit chip as claimed in claim 7, wherein the electronic circuit chip is a monolithic semiconductor integrated circuit chip, the memory is an electrically erasable and programmable read-only memory, and the metal shielding layer over the memory is an upper layer of metal on the electronic circuit chip.

12. (New) An electronic circuit chip comprising:
a memory for storing information;
a microprocessor coupled to the memory for reading information from the memory;
at least one input to the electronic circuit chip for receiving information to be written to the memory, and for receiving data to be processed by the microprocessor; and
at least one output from the electronic circuit chip for transmitting data processed by the microprocessor;
wherein the electronic circuit chip is constructed so that information can be stored

in the memory but not read from any output of the electronic circuit chip, and the microprocessor is programmable for encrypting data in accordance with an encryption procedure defined by information that can be stored in the memory but not read from any output of the electronic circuit chip;

wherein the electronic circuit chip is constructed so that it is virtually impossible to recover the information in the memory by probing, inspection, or disassembly; and

which includes a metal shielding layer over the memory so that the information stored in the memory cannot be read by visual inspection or probing;

wherein the electronic circuit chip is a monolithic semiconductor integrated circuit chip, the memory is an electrically erasable and programmable read-only memory, and the metal shielding layer over the memory is an upper layer of metal on the electronic circuit chip; and

wherein the microprocessor is programmed to read an encryption key from the memory, and to compute the encrypted data using the encryption key, and the encryption key defines the encryption procedure assigned to the electronic circuit chip.
